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(54) Title: APPARATUS AND METHOD FOR ACCESSING PHARMACY INFORMATION AND ORDERING PRESCRIPTIONS

(57) Abstract: A method and system for implementing an on-line pharmacy website that allows customers of a particular pharmacy company to order new prescriptions, refill prescriptions and transfer existing prescription. The method and system also afford a user access to personal information such as their prescription history. Integration of an internet server hosting the website with a pharmacy company's intranet server and customer database allows a customer full on-line access to their information stored by the pharmacy company, as well as access to drug information. A further feature includes allowing the user to format and print their prescription history and records. Another feature of the system and method includes "click-free" registration of customers with the website by entry of customer data by company personnel at any company location connected to the intranet server, such as at a pharmacy store. Personnel solicit information from the customer including, for example, an e-mail address. Registration of the customer is then performed by the company personnel and website access information is, in turn, communicated to the customer via e-mail.

APPARATUS AND METHOD FOR ACCESSING PHARMACY INFORMATION AND ORDERING PRESCRIPTIONS

RELATED APPLICATIONS

This application claims the benefit of U.S. provisional application number 60/165,479, filed November 15, 1999.

BACKGROUND OF THE INVENTION

The present invention relates to a method and apparatus for accessing pharmacy information and ordering prescriptions via a network connection, and more particularly to access via a network, such as the Internet, to personal pharmacy information and personal prescription ordering.

In the area of Internet commerce, the use of websites to relay product information and also allow customers to order goods or services via the internet is well-known. Within this arena the dispensing of pharmaceutical information and the filling of medical prescriptions is known. Typically such websites are proprietary and allow customers of a particular pharmacy to order prescriptions from that particular pharmacy or pharmacy company. Since many of these companies consist of a chain of member stores, the use of internet for dispensing drug information and for ordering prescriptions becomes more desirable.

Prior art on-line pharmacies include linking a number of users accessing the internet to ~~link to~~ a network server owned by the pharmacy in order to view pharmaceutical information and order prescriptions to be delivered either via mail or to be picked up at a particular store location of the pharmacy company by the user. Past attempts, however, have consisted of an internet server for communicating with the pharmacy customers via the

internet and accepting prescription orders. These orders are then, in turn, faxed or e-mailed to the particular pharmacy store, for example, where a pharmacist or technician then verifies the prescription and fills the prescription order. Such attempts, however, have limitations in that the server connected to the internet is not interfaced with a company data base of customers prescription and health histories, thus creating more manual steps to be undertaken such as e-mailing or faxing prescriptions and access by the pharmacist or technician to another repository of health and prescription records for the particular user.

There is therefore a need for an apparatus and method of on-line pharmacies that integrates customer health and prescription records with a network server that is effecting communication with users via the internet. Additionally, the prior art systems also make access of health and prescription records kept by the pharmacy company difficult to access by the end users since no integration exists between the internet network server and the information repositories kept by the particular pharmacy company. Hence, there is a need for a method and apparatus that affords more ease of access to prescription and health history records kept by the particular pharmacy company.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 illustrates a system for an on-line pharmacy according to the teachings of the present invention;

Figure 2 illustrates a diagrammatic illustration of the organization for an internet on-line pharmacy site according to the teachings of the present invention;

Figure 3 illustrates a process for requesting new prescriptions via the internet website according to the teachings of the present invention;

Figure 4 illustrates a process for locating a particular pharmacy store via an internet website according to the teachings of the present invention:

Figure 5 illustrates a process for requesting shipping delivery of prescriptions via an internet website according to the teachings of the present invention;

Figure 6 illustrates an abbreviated method for registering an individual user with an on-line pharmacy website according to the teachings of the present invention;

Figure 7 illustrates a comprehensive process for registering an individual user in an on-line pharmacy according to the teachings of the present invention;

Figure 8 illustrates a process of locating a store as part of a procedure for selecting a prescription order at an on-line pharmacy website according to the teachings of the present invention;

Figure 9 illustrates a process for allowing a user to view registration information with an on-line pharmacy website according to the teachings of the present invention;

Figure 10 illustrates a process for viewing a user's prescription history and profile as well as formatting and printing the history according to the teachings of the present invention;

Figure 11 illustrates a process by which a user of an on-line pharmacy website may check status of a prescription order according to the teachings of the present invention;

Figure 12 illustrates a process to submit questions to a pharmacist via an on-line website according to the teachings of the present invention;

Figure 13 illustrates a process for finding drug information using an on-line website according to the teachings of the present invention;

Figure 14 illustrates a process for checking drug interactions via an on-line pharmacy website according to the teachings of the present invention; and

Figure 15 illustrates a process undertaken for viewing a user's prescription history during a first time login to an on-line pharmacy website according to the teachings of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The present teachings of the invention solve the above-described problems by integrating an internet on-line pharmacy website with an in-house internet server and customer database. This integration affords a user of the on-line website the ability to order prescriptions, wherein the prescription order is sent directly to a pharmacy store via network connections thereby eliminating the need for separate communications such as e-mail, facsimile, or telephony communication. Additionally, since the customer database and internet server are integrated with the network server the user may readily view the user's complete prescription history, as well as the ability to format and print the prescription history. Furthermore, the integration of the network server with the internet server, which serves to network the locations of all pharmacy stores owned by the particular pharmacy company to enable website registration of a particular customer/user of the pharmacy company without accessing the on-line pharmacy website, thereby effecting a "click-free" registration of customer/users. That is, for example, a user may provide e-mail information to a particular store location of the pharmacy company, which in turn registers the user via the intranet connecting the pharmacy company locations.

Figure 1 illustrates an on-line pharmacy system according to the teachings of the present invention. The system includes a network server 106 that is connected to a network 104 such as the internet. One or more users via a user browser 102 may access the network server 106 via the network 104. Network server 106 is, in turn, connected to an application

server 108 that enables integration of a customer data base 110 having information such as a customer's prescription history and health history. The intranet server 112 is a network internal to a pharmacy company and links pharmacy store locations with one another.

The application server 108 serves to integrate the customer data base 110, the internet server 112, and the network server 106 so that information and services offered by the pharmacy company are available to all user browsers 102 accessing the network server 106 by the network 104.

Figure 2 illustrates an exemplary website organization that can be implemented in the network server 106. An initial screen or "homepage" is shown at 202. This page within the website allows users various options that they may select including a pharmacy homepage 204 and a health library homepage 210. Additional services such as shopping services and other information (e.g., company information) 212 may be also linked with the homepage 202. Within the health library homepage 210 are various links to health information that can be provided. As shown, links to information such as a healthcare library 244, a drug interactions search page 214, a drug interactions check 224, first aid information 246, a quiz concerning health issues 248, preventative health scheduling 250, a glossary of medical procedures 252, or a store locator 230 for the particular company are shown but are not limited to just these particular types of information.

From the pharmacy homepage 204, are links to pharmacy services, information, and a customer's personal health and prescription history. Examples shown include the drug interactions search 214 which is the same as the drug interactions search linked from the health library home 210, request for a new prescription order 218, which is also preferably shown with a direct link from the homepage 202, a registration view 222 that shows a user their particular registration information within the website, the drug interaction check 224

which is also linked from the health library home 210, a status check for particular orders placed by the user 228, a pharmacy store locator 230, which is also shown linked to the health library homepage 210, a profile viewer 234 that displays a user's prescription history and other personal health information, a print history 236 that enables a user to format and print the viewed user profile from the profile viewer 234, a pharmacist spotlight that displays information concerning particular pharmacists employed by the pharmacy corporation, and a refill reminder 242 that allows a user to request a reminder such as a date that a prescription must be refilled.

Additionally from the pharmacy home page 204 is a link to a customer registration 206, which, in turn, allows a user to select a username and password as shown by block 208. This registration, however, could be linked from any portion of the website not just the pharmacy home page 204 as will be described later.

The description that follows illustrates the particular processes that are followed to perform various functions offered by the on-line pharmacy website. Each of these processes are exemplary according to a preferred embodiment of the teachings of the present invention, but could also be employed in other ways as will be appreciated by those of ordinary skill in the art.

Figure 3 illustrates the process for requesting new prescriptions as indicated by link 218 in Figure 2. After a user has navigated to the order or request new prescription area 218 from either the home page or the pharmacy home page, the user logs in the website using a user name and password as shown in block 302. If the user has not previously registered, flow proceeds to block 332 where the individual may proceed with a short registration as will be illustrated in Figure 6. Once the individual is registered flow proceeds to block 304 where the user may select a method or source of the prescription. If the user has entered an incorrect

user name and password at the login 302, a user may request a password hint to be sent via e-mail as indicated by block 330.

At block 304, the user has the option to print a mail order form 334, which can be used by the customer to manually fill-out and mail to a pharmacy store. At this point the process ends if the customer selects this particular option. In the alternative, if the user desires the prescription to be mail ordered or electronically transmitted to a particular pharmacy location for pick up flow proceeds from block 304 to three possible options.

The first option, shown in block 306, is transfer from another pharmacy company, for example. At step 306 the customer enters information about the prescription they are transferring (i.e., the drug name). Other information such as the previous pharmacy name, telephone number, prescription strength, prescription number, drug quantity, doctors name and the doctors phone are input by the user. Flow then proceeds to a "shopping cart" displaying the current order as illustrated at block 316. A dashed line from block 316 back to block 306 indicates that the customer may return from the "shopping cart" to either change the order or add additional prescriptions.

The second option available to the user is to enter a new prescription as illustrated at block 308. Here the customer is prompted to enter information about the new prescription to be filled including doctors name and phone, the drug name, strength and drug quantity. Flow then proceeds to the "shopping cart" displaying the current order at block 316.

The final option available to the user is to refill a prescription. Flow proceeds from block 304 to decision block 310 where the process quarries whether a recorded personal identification number has been entered by the user. That is, a user is given an option to simply enter a prescription number, which is particular to the users specific prescription to be refilled. If no recorded personal identification number has been entered, flow proceeds to

block 312 where it is determined whether or not this is the users first time logging in. Here the user is given the option to log in using a personal identification number and, if the customer enters the personal identification number, flow proceeds to a prescription history display as shown in block 314. If the user chooses not to enter a personal identification number, the users then prompted to enter the prescription refill number at block 330. If the prescription number is invalid or not found the user is notified at block 332 that the prescription has not been found and prompted to reenter the prescription refill number. Once the prescription refill number has been entered flow proceeds to the "shopping cart" as indicated by block 316. Alternatively, if at either block 310 or block 312 the customer has entered a personal identification number, the flow proceeds to block 314 where a prescription history is displayed. From the screen a user may simply select refill of one or more particular prescriptions displayed. Flow then proceeds to the "shopping cart" displaying the current order in block 316.

After all the prescriptions are added by the customer into the "shopping cart" and has chosen to complete their order flow then proceeds to decision block 320. Additionally, the user is given the option to cancel their order where upon a warning pop-up 318 is shown so that the customer can definitively chose to cancel the order or continue with the order.

At decision block 320 it is determined whether this order is the customers first order and if the customer is refilling a prescription they have received at a particular pharmacy store location. If the user is selecting on-line for the first time the user is given a choice as to the delivery method in block 322. Here the user may select between either having the order shipped or may locate and select a pharmacy store for pick-up of the prescription. If the user selects shipping delivery as indicated at block 328 the order is sent to a shipping facility where the prescription is filled and mailed out. Otherwise, an order for the prescription is

sent to the store location selected at block 324 which automatically receives the prescription order via the application server 108 and internet server 112 as shown in Figure 1. The order is then processed and filled by personnel at the pharmacy store location selected. If the order is not the users first order as determined at decision block 320, the user is given the option to select the last pharmacy store location they used and information such as the store number, address, pharmacy phone and pharmacy hours may be displayed. Otherwise, the user may also select a shipping delivery request for mailing of the prescription or locate and select another store for pick-up.

Figure 4 illustrates in further detail the process that is executed to locate a pharmacy store location as indicated by block 230 in Figure 2. Once a user request to locate a store is received, a store location search is performed at block 402 after the user inputs information such as address, city, state, zip code, whether or not the store location is open 24 hours, has a drive through or within a search radius selected from various amounts of distance. Once the search is complete the results are displayed as shown at block 404 where the customer can select a store to view more details concerning the store as indicated by block 408 or may search again as indicated by the return arrow to block 402. Additionally, driving instructions may be shown in a pop-up as indicated by 406 either directly from the search results or after viewing the particular store information details.

Figure 5 illustrates in further detail the processing of a shipping delivery request 328 as shown in Figure 3. After a shipping delivery request is registered a command to ship the order 504 is executed. Here the customer is allowed to select or enter an address to have their order shipped to and the shipping method (e.g., U.S. Mail, FedEx, etc.). The customer then submits this information and next billing information is requested as shown at block 506. In block 506 the customer is either prompted to enter billing information, such as credit card

information and address information. Additionally, the customer can elect to have new payment information saved to their profile or, if the information has already been saved may simply select to be billed according to the previously entered billing information. The flow then proceeds to decision block 508 which determines if there is any missing information. If there is missing information, flow proceeds to block 510 where the user is prompted to enter further registration information required for complete registration of an individual user. Once this is accomplished flow proceeds to decision block 512. If no missing data is determined at decision block 508 flow proceeds also to decision block 512 where it is determined whether or not the user has entered a personal identification number. If not the customer is prompted to review the order details in block 516. If no personal identification number was entered then the user is prompted to review the order details without information concerning refills other than the type and prescription number. From both blocks 514 and 516 flow proceeds to a confirmation screen confirming that the order has been placed as shown at block 518 and a corresponding e-mail is subsequently sent to the customer confirming receipt of the order. In addition, a warning pop-up 520 is shown to the user reminding the customer that the pharmacy company will be contacting the prescribing doctor if required by the particular law of the jurisdiction in which the user resides. In addition, the customer is informed that an e-mail will be sent when the prescription is ready.

Figure 6 illustrates the process for registering individuals in an abbreviated manner such as is accomplished in step 332 of Figure 3, for example. This abbreviated registration of individual users is intended to allow the users who are new to the on-line pharmacy website the ability to register for extended services without going through the full registration process. Once it is determined in step 602 that the individual user desires to register with the on-line pharmacy website flow proceeds to step 604 wherein the customer is prompted to provide

personal data for registration. Such information includes name, a user name, a password, a password hint, gender, date of birth, e-mail address, home address, home phone, work phone and an indication in whether they wish to receive e-mails from the pharmacy company. The information is then submitted by the user wherein the website determines at decision block 606 whether information is missing or the user name selected by the individual user has already been used. If there is any information missing the flow proceeds to 608 wherein the user is allowed to edit the registration information entered by the user. Once this is accomplished flow proceeds to a confirmation screen 610 where the information may be checked by the user for potential errors and the customer then is allowed to confirm the information if correct. Finally, a thank you page 612 is displayed to indicate to the user that registration has occurred successfully.

For those users who wish to utilize more of the functions offered on the website, a normal individual registration process is followed as illustrated in Figure 7. Here the individual is prompted to input information at block 704 including the particular users health history, health conditions and allergies. To assist the user in entering health conditions in allergies screen 706 and 708 are available that list conditions and allergies from which the user may select. Additionally, the individual user is also requested to enter the same type of information as was entered in the abbreviated registration process illustrated in Figure 6. The input of health conditions and drug allergies allows other features such as checking drug interactions and also alerting a user as to potential side effects that may result from existing health or allergy conditions and potentially prevent the occurrence of such side effects. After the information has been entered in block 704 the flow proceeds to decision block 710 where it is determined whether or not the user has previously registered using the abbreviated registration. If the user has flow simply proceeds to a confirmation screen 714. If not the

individual is then prompted to input the remaining registration information that was required in the abbreviated registration process as illustrated in Figure 6. Once this information is complete and accurate the user is directed to the confirmation screen 714. Additionally, the user may access the drug allergies and health conditions pages 706 and 708 from the confirmation screen if any other health conditions or allergies need to be added or deleted. Once the user has confirmed the registration information at 714 the user may either locate a pharmacy store location that they wish to pick-up prescriptions from or initiate a shipping delivery request if they are in the process of ordering a prescription. The flow then proceeds to block 720 which returns to whatever process the individual user is undergoing at the present time.

Figure 8 illustrates the store location selection process used by an individual user when undergoing a prescription order selection. Here flow proceeds from step 324 as shown in Figure 3, for example, here the user is allowed to locate a particular pharmacy store by first searching at step 802. The user is prompted to input search criteria similar to those previously described with respect to step 402 in Figure 4. Once the search results are delivered at page 804 the user may either view store information detail and instructions to the store as shown in pages 806 and 810 before selecting a pick-up time at page 808 or simply proceed from the search results 804 to selecting a pick-up time 808. In a preferred embodiment, the pick-up time has a default time that is predetermined and must be actively changed by the individual user if a different time is desired. Next flow proceeds to decision block 812 where it is determined whether or not there is missing information. If so, flow proceeds to register the individual at page 814, which corresponds to the registration start block 702 as illustrated in Figure 7. If no information is missing or once registration has been completed flow then proceeds to decision block 816 to determine whether or not there is a

missing personal identification number. If the personal identification number is not missing the user is shown a screen 820 to review the order details and subsequently confirm the order detail in screen 824. In addition, a warning pop-up 822 appears to alert the customer that the users doctor will be contacted, if required. A subsequent e-mail is then sent to the user confirming the order and also a follow-up e-mail may be sent when the order has been filled. In the alternative, if the personal identification number is missing the user is shown a screen to review the order details 818 without refill information and subsequently the order is confirmed as shown by page 824 and the appropriate warning 822 is also shown to the user.

Figure 9 illustrates the process by which a user may view and edit their registration information from the pharmacy home page 204, as shown in Figure 2. When a user selects to view their registration at screen 222, a login screen 902 is presented to the user. The user enters a username and password, which is verified by the network server 106. If the user has forgotten their password, a request for sending a password hint may be performed as indicated by screen 904. If the user has not yet registered, the user may also proceed to the abbreviated registration at screen 906 and complete the process illustrated in Figure 6. After the user has successfully logged in, the flow proceeds to decision block 908, where a determination is made whether the user has a personal identification number (PIN) on record.

If a user does not have a PIN on record, a view registration screen 910 is displayed to allow the user to view their particular registration information and edit personal registration information (914) or change their password (912). Alternatively, if the user has a PIN on record, a screen 916 for viewing their registration history is shown with links to screens for editing personal registration information (920), as well as registered shipping information, payment information (924), health history (926) and insurance provider information (928). Additionally, the user has the option to change their password as shown at step 918 or view

their profile (prescription history) with a link screen 234 to the start of the history viewing procedure, which will be described later in regard to Figure 10. Also, the view registration procedure illustrated in Figure 10 includes a verification step 932 in which credit card payment information, for example, is verified or authenticated. If the credit card information is not verified at step 932, a credit card error screen 930 indicates to the user that there was an error in verification.

Figure 10 illustrates a procedure according to the teachings of a preferred embodiment that allow users to view their profile/prescription history. After the user requests to view their profile/prescription history, the user is prompted to log in at screen 1002 by entering a username and password. The user enters a username and password, which is verified by the network server 106. If the user has forgotten their password, a request for sending a password hint may be performed as indicated by screen 1004. If the user has not yet registered, the user may also proceed to the abbreviated registration at screen 1006 and complete the process illustrated in Figure 6.

Next, the process proceeds to a determination of whether or not this is the user's first login to the profile/prescription history viewer. If it is the first time that the user has logged in, a personal identification number (PIN) must be assigned to the user before accessing further information according to a preferred embodiment. This is to ensure a further degree of security for personal information of the user. However, it is noted that such degree of security is not necessarily required, merely desirable. The step 1008 prompts the user for a PIN. If the user does not have a PIN, a process is invoked to assign a PIN to the user. This process will be described later in connection with Figure 15. Once the user has entered a correct PIN number the customer is shown their prescription history that is stored in the customer database 110. Such information can included, but is not limited to, prescription

number, refills remaining, drug name, drug strength, the doctor's name, last fill date and refills remaining.

From the prescription history screen 1010, various further information can be displayed. For example, drug information can be hyper-linked from the prescription history screen 1010 to allow display of specific drug information at screen 1012, including, for example, images of the particular medications and pricing information. Also from the prescription history screen 1010, further details concerning each piece of information given in the prescription history screen 1010 may hyper-linked to a prescription history detail screen 1014.

The process for viewing a user's profile/prescription history also features steps enabling the user to format and print their prescription history. From either the prescription history 1010 or the prescription history detail 1014, a user may request to print their prescription history at step 1016. The user is then allowed to select the formatting of the prescription history to be printed at screen 1018. For example, the user may select which type of information they wish to be displayed and in what order the information is be listed. Various other formatting options that may be available to user is desired. Once the user has selected the desired printing format, the print request is made viewable in screen 1020 and the user either has the option to accept the format and print at step 236 (corresponding to step 236 illustrated in Figure 1) or return to the formatting screen 1018 for further editing of the format.

Figure 11 illustrates a process for checking the status of a prescription order that has been placed. When a user selects the check order status screen 228 from the pharmacy homepage 204, the user is then prompted to login at step 1102 by entering a username and password. The user enters a username and password, which is verified by the network server

106. If the user has forgotten their password, a request for sending a password hint may be performed as indicated by screen 1104. If the user has not yet registered, the user may also proceed to the abbreviated registration at screen 1106 and complete the process illustrated in Figure 6. Once the user has logged in, a screen 1108 displaying the status of currently pending orders including information such as the date received, the order number, total amount charged and order status (e.g., shipped, in-process, etc.). The user is also allowed to view their prescription history by linking to screen 1008 shown in Figure 10.

Figure 12 illustrates a feature of the pharmacy website that enables users to submit questions they may have to a pharmacist. This feature may be accessed from the pharmacy home page 204 or may also be accessed from other pages, such as the prescription ordering screens, if desired. When a user selects the "Ask a Pharmacist" feature at 1202, the user is then prompted to login at step 1204 by entering a username and password. The user enters a username and password, which is verified by the network server 106. If the user has forgotten their password, a request for sending a password hint may be performed as indicated by screen 1104. If the user has not yet registered, the user may also proceed to the abbreviated registration at screen 1106 and complete the process illustrated in Figure 6. Once the user a logged in, a screen 1210 is displayed enabling the user to input and submit a question that will be delivered either directly via the network server 106 or via the intranet server 112 to a pharmacist. After the question has been submitted, a thank you screen 1212 appears to inform the user that the question has been successfully transmitted.

Another feature of the pharmacy website is access to a repository of drug information. Figure 13 illustrates a process that enables a user to access various drug information. In step 214, the user requests to find specific drug information. Screen 1302 is displayed enabling the user to enter or select search criteria. For example, the user may select a letter of the

alphabet, which causes an alphabetical list of drugs beginning with that letter to be displayed and from which the user may select a particular drug. Another example would be allowing the user to enter the name or partial name of a drug, and a list of pharmaceuticals that match the user entry is displayed. The repository of drug information is searched and the search results are displayed to the user in screen 1304. If the search does not yield results or yields irrelevant results, the user may return to the search entry screen 1302 to refine or change the search query.

From the search results displayed in screen 1304, the user may select which results they wish to view. After selecting one or more results, the information concerning the particular drugs is displayed in screen 1306. The information may includes pricing, dosage, commonly prescribed quantity, price of the most commonly prescribed quantity, the generic name, common uses and precautions. Also if an image of the drug exists in the information repository as determined at block 1314, the drug images may be displayed to the user at screen 1316.

An additional feature allows the user to check drug interactions with the particular drug selected. Prior to procession to the drug interaction check, a determination is first made whether the user has an assigned personal identification number (PIN). If the user has a PIN, the flow proceeds to screen 1410, which will be described in connection with Figure 14. For users not yet having an assigned PIN, the flow proceeds to screen 1412, which will also be described in connection with Figure 14.

In Figure 14, the user is allowed to check drug interactions from either the pharmacy home page 204 or the health library home page 210, both shown in Figure 2. Also, as described above, the drug interaction check process may also be entered from the find drug information process illustrated in Figure 13. When a user selects the checking of drug

interactions at screen 224, the user is prompted to select a first drug at screen 1402 from either an alphabetical listing of drugs in step 1404 or by direct input or search as illustrated by screen 1406. Next, a determination is made whether the user has a PIN assignment. If the user does not, then a comparison list of drugs is displayed at screen 1412 from which the user may select. Similar to the selection of the first drug in step 1402, the user may select from an alphabetical list of drugs in screen 1414 or search for a particular drug 1416 and then select a second drug from either screen, the choice displayed at screen 1422. Once the second drug is selected, the reaction results are displayed to the user at screen 1424.

If the user has a PIN assignment as determined at step 1408, a comparison with the user's profile the drugs presently in the user's profile or personal prescription history stored in the database 110 is performed and the results of the comparison are displayed in a reaction results screen 1424. Also, at screen 1410, if the user wishes to compare with another drug not in the user's profile or personal prescription history, the user has the option to search for particular drugs or select from an alphabetic list of drugs, the user may so choose as indicated by screens 1418, 1420 and 1426. The user may then select the second drug and compare with the first drug, the results being displayed in the reaction results screen 1424.

Figure 15 illustrates the process by which a user may associate a PIN when logging in for the first time to particular portions of the pharmacy website. Preferably, the PIN is delivered after initial registration to the user either by U.S. mail or any other means of communication by which the PIN may be securely communicated to the user. Once the user has received the PIN, the routine of Figure 15 may be initiated , a screen 1504 is displayed prompting the user to enter the PIN. The server 106 then checks whether the PIN entered is correct at block 1506. If the PIN is not correct, a error screen 1508 is displayed indicating that the PIN is incorrect. The user may re-enter the PIN by returning to screen 1504.

However, if an incorrect PIN is entered three times, the server locks out re-entry of the PIN for that particular user as indicated by screen 1510.

Alternatively, when a correct PIN is entered the association is performed and the process returns to whatever previous process was being performed when the first time login process was invoked. As shown in Figure 15, these may include viewing profile/prescription history (screen 1008), requesting a new prescription (screen 312) or during the request for a refill reminder (screen 242 as shown in Figure 2).

Another feature of the system shown in Figure 1 is the ability to register users with the on-line pharmacy website via the intranet server 112. An exemplary methodology includes soliciting contact information (e.g., an e-mail address or a postal address) and other pertinent information from a potential user when they visit a member pharmacy store location. Personnel at the member pharmacy store then enter the information concerning the user into a connection to the intranet server 112 located at the member pharmacy store, which is then associated with information concerning the user previously stored in the database 110 via the connection through the application server 108 and also with the network server 106. The user is then sent a user name and a password based on the contact information via an e-mail or U.S. mail, for example, with which the user may log on to the on-line pharmacy website. This methodology enables a user to conveniently register while visiting a member pharmacy location without having to first access the website via the Internet. Hence, the registration process is essentially "click-free" to the user. The location of the connections to the intranet server could also be located in other centralized locations of the particular pharmacy company or network of pharmacy companies, such as a pharmacy company headquarters or other office and warehouse locations of the particular pharmacy company

Using the above methodology, when the pharmacy personnel register the user, a search for the customer/user is first performed on a utility residing on the intranet server 112. The search terms may include the user's prescription number, name, phone number, birth date to locate the user. Of course, certain terms such a the prescription number will return an exact match, whereas terms such as the user's name or birth date may yield multiple matches from which the pharmacy personnel will have to determine the correct match for the particular user. Other methods of locating a user may include accessing the user's specific information from the customer database 110 and allowing execution of registration from this particular accessed information.

Once the correct user is located and selected, the personnel enter the user's e-mail address, for example, and any other pertinent information that may not be previously recorded (e.g., phone number, date of birth, postal address, etc.). After all desired information has been entered, a registration command is sent to the application server 108, which sends the command to the network server 106, which performs registration fo the user, and to the customer database 110 for association of the user's registration with the user's information stored therein. After registration is complete, an e-mail, for example, is sent to the user by the network server 106 that includes the username and password, which the user may use to log in to the on-line pharmacy website.

Although certain methods and apparatus constructed in accordance with the teachings of the invention have been described herein, the scope of coverage of this patent is not limited thereto. For example, the particular organization of the on-line pharmacy website shown in Figure 2 is not limited to only this one possible arrangement, but is merely one of many possible organizations that could be employed to implement an on-line pharmacy website in accordance with the teachings of the present invention. On the contrary, this patent covers all

embodiments of the teachings of the invention fairly falling within the scope of the appended claims either literally or under the doctrine of equivalents.

CLAIMS

What is claimed is:

1. A system for accessing pharmacy data and ordering prescriptions via a network comprising:

a network server connected to the network that is accessible by one or more users via the network;

an application server connected to the network server;

a database connected to the application server, the database containing information concerning drugs and personal information concerning one or more of the users; and

an intranet server that is connected to at least a plurality of member pharmacies and one or more shipping facilities, the intranet being connected to the application server;

wherein the application server is configured to allow each of the one or more users to access the information concerning drugs and personal information concerning each respective user of the one or more users and enable each of the one or more users to one of transmit a prescription order to at least one of the plurality of member pharmacies and one of the one or more shipping facilities.

2. The system as defined in claim 1, wherein the network server displays one or more interactive webpages to the one or more users that is viewable by the one or more users with a respective network browser.

3. The system as defined in claim 1, wherein the personal information concerning the one or more users includes a prescription history of each respective one of the one or more users.

4. The system as defined in claim 3, wherein the network server is configured to format display of the prescription history of each respective one of the one or more users according to a plurality of selectable display formats that are selected by the respective one of the one or more users.

5. The system as defined in claim 4, wherein the network server is configured to allow each respective one or the one or more users to print each particular selectable display format of the prescription history that is selected by the respective one or the one or more users.

6. The system as defined in claim 1, wherein the network is the Internet.

7. The system as defined in claim 1, wherein access to personal information concerning each respective user of the one or more users includes at least one of access and viewing of the personal information, editing of the personal information and adding additional information to the personal information previously stored.

8. The system as defined in claim 1, wherein the prescription order includes at least one of ordering a new prescription, refilling an existing prescription and transferring a previous prescription from another entity previously filling the previous prescription.

9. A method enabling one or more users to order prescriptions and access pharmacy data via a network comprising the steps of:

accessing a network server hosting a network website via the network;

registering a user with the network website;

displaying to the on the website user at least one of a prescription order selection and a pharmacy data access selection:

displaying one or more prescription order displays to the user on the website when the user selects the prescription order selection wherein the user is allowed to select to transmit a particular prescription order to a communication network that connects at least one of a plurality of member pharmacies and one or more distribution facilities; and

displaying one or more pharmacy data access displays to the user when the user selects the pharmacy data access selection wherein the user is allowed to access one or a personal prescription history and specific drug information from a database.

10. The method as defined in claim 9, wherein the step of registering the user further comprises the steps of:

prompting the user to enter a username, a password and personal profile information;

transmitting an entered username, password and personal profile information to a network server;

storing the username, password and personal profile information in the network server; and

enabling the user to access at least portions of the website by subsequent entry of the entered username and password.

11. The method as defined in claim 9, wherein the personal prescription history includes one or more of current prescriptions, past prescriptions, name of prescribing doctor, dosage, strength, drug names, linkages to drug information, pricing of drugs and drug interaction functions.

12. The method as defined in claim 9, wherein the particular prescription order includes one of a new prescription order, a refill of an existing prescription and transferring a previous prescription from another entity previously filling the previous prescription.

13. The method as defined in claim 9, wherein the method further comprises the steps of:

assigning the user a personal identification number subsequent to the step of registering the user;

communicating the personal identification number to the user via a secured communication; and

prompting the user to enter the personal identification number to allow the user to access secured portions of the website.

14. The method as defined in claim 9, wherein the step of registering the user further comprises:

manually entering at least one of user contact information, a username, a password and a user personal profile concerning the user into a connection to an intranet server located in one of any one of a plurality of member pharmacies and one or more centralized company locations;

associating the user to a network server and information concerning the user currently stored in the database from the intranet server; and

communicating at least a username and password, which enable the user to access the network website, to the user via a secured communication using the user contact information.

15. The method as defined in claim 9, further comprising the steps of:

enabling the user to select one or more display formats for the personal prescription history; and

enabling a user to print a specific format selected by the user from the one or more display formats.

16. The method as defined in claim 9, wherein the particular prescription order includes a selectable designation by the user to communicate that the prescription will one of:

a) be manually picked up the particular prescription order at a selected pharmacy store location; and

b) shipped to a designated postal address.

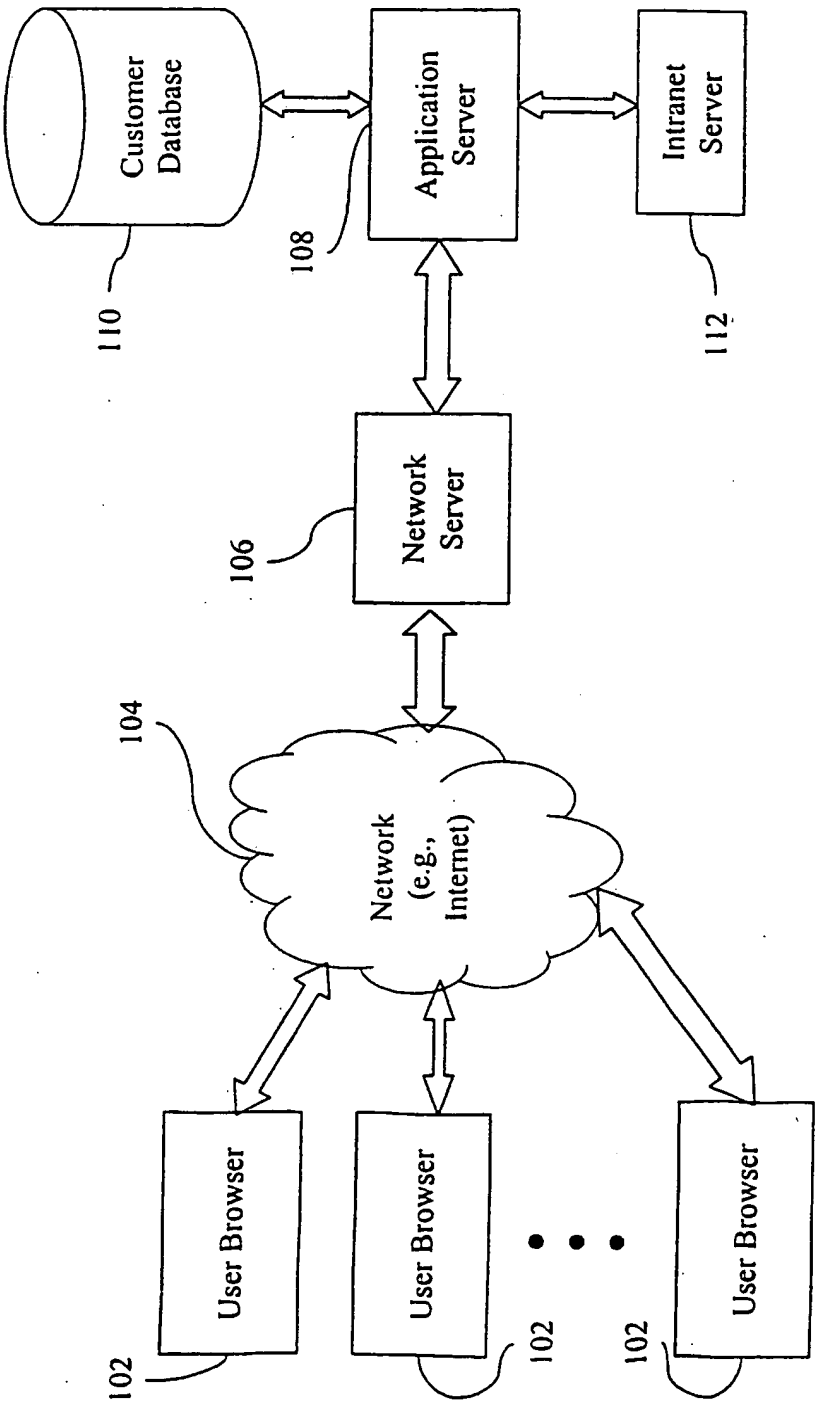
Customer Database
Application Server
Intranet Server
110
108
112
Network Server
106
104
Network (e.g., Internet)
User Browser
User Browser
User Browser
102
102
102

FIG. 1

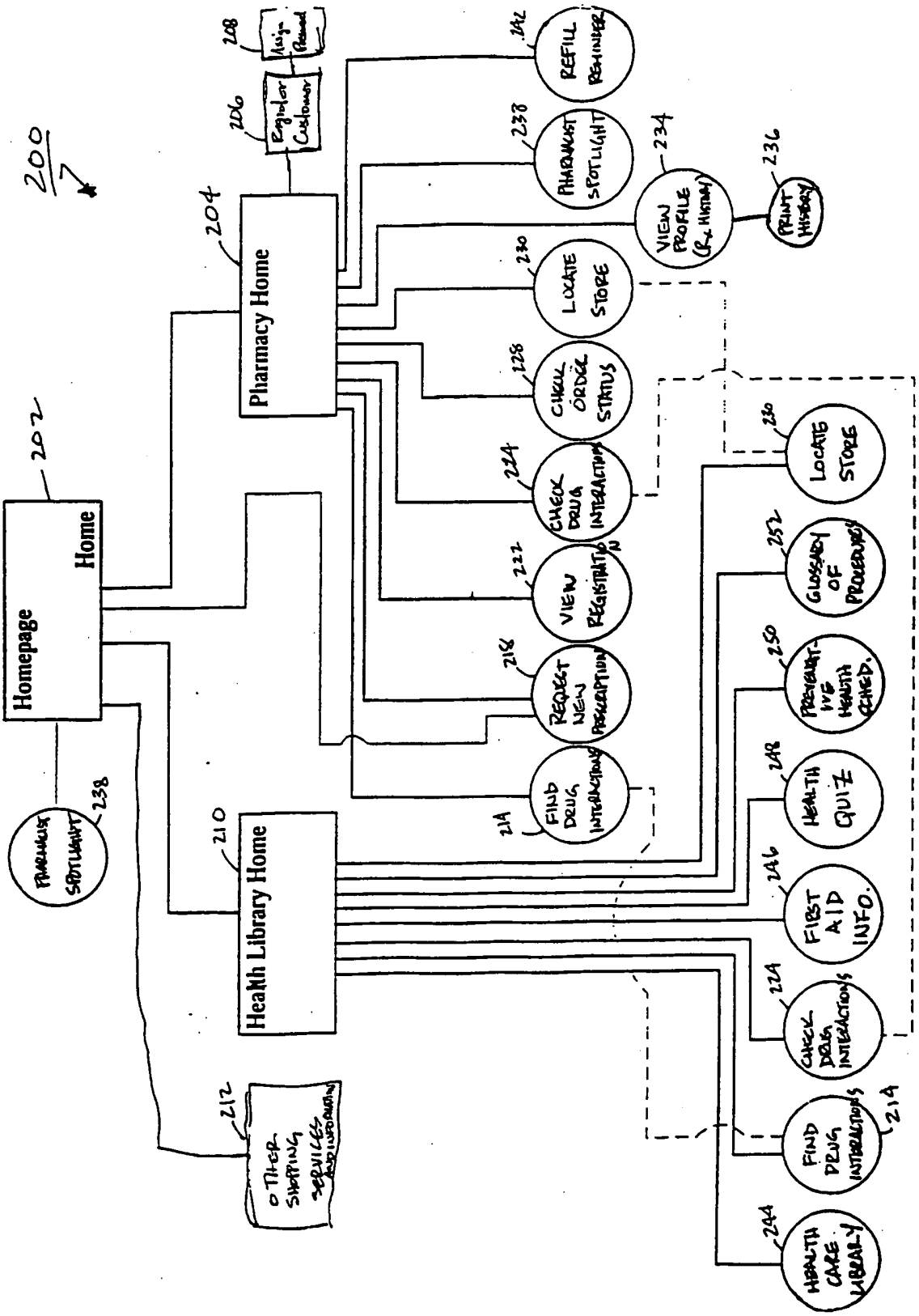
200
Homepage
207
Pharmacy Home
204
Health Library Home
210
Pharmacist Spotlight
238
Other Shopping Services and Information
212
Register Customer
206
Assign Password
208
Refill Reminder
242
Pharmacist Spotlight
238
View Profile (& History)
234
Print History
236
Locate Store
230
Check Order Status
228
Check Drug Interaction
224
View Registration
222
Request New Prescription
218
Find Drug Interactions
216
Glossary of Procedures
252
Preventative Health Alert
250
Health Quiz
248
First Aid Info.
246
Check Drug Interactions
224
Find Drug Interactions
214
Health Care Library
244

Fig. 2

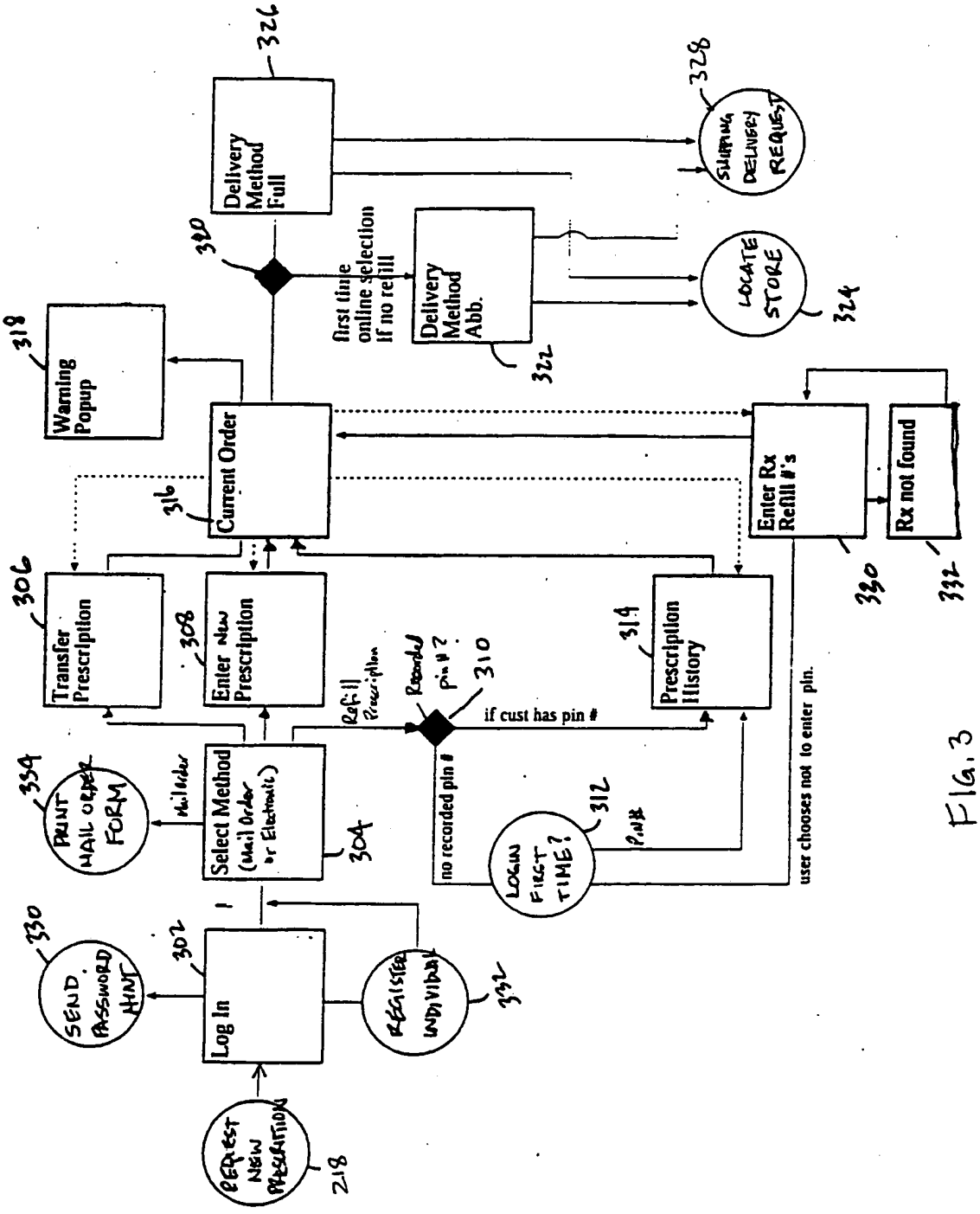
Delivery Method Full
326
328
SHIPPING DELIVERY REQUEST
310
first time online selection if no refill
Delivery Method Abb.
322
LOCATE STORE
324
318
Warning Popup
Current Order
316
Enter Rx Refill #'s
330
Rx not found
332
306
Transfer Prescription
308
Enter New Prescription
Refill Prescription
Record pin #?
if cust has pin #
314
Prescription History
user chooses not to enter pin.
334
PRINT MAIL ORDER FORM
Select Method (Mail Order or Electronic)
304
no recorded pin #
LOGIN FIRST TIME?
312
330
SEND PASSWORD HINT
302
Log In
REGISTER INDIVIDUAL
332
REQUEST NEW REGISTRATION
218

FIG. 3

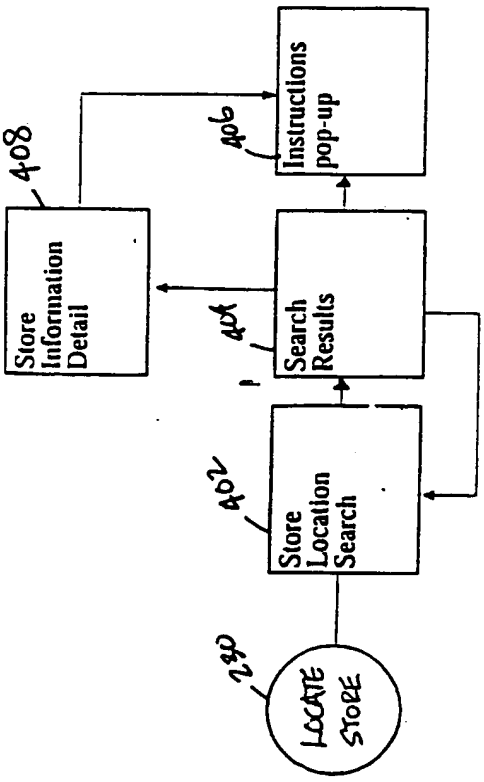
LOCATE STORE
Store Location Search
Search Results
Store Information Detail
Instructions pop-up
402
404
406
408

FIG. 4

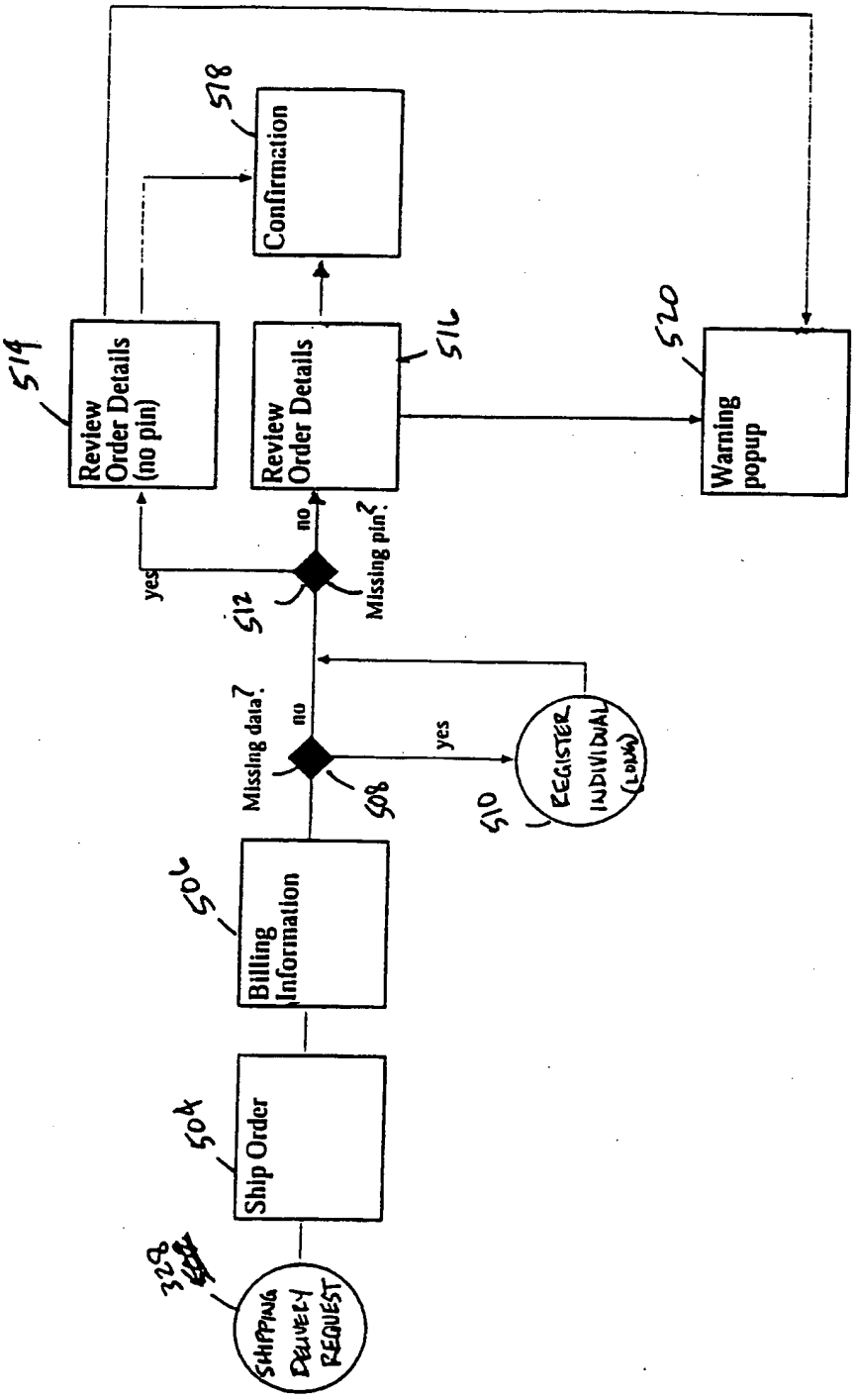
328
Shipping Delivery Request
504
Ship Order
506
Billing Information
508
Missing data?
no
yes
510
Register Individual (Logon)
512
Missing pin?
no
yes
514
Review Order Details (no pin)
516
Review Order Details
518
Confirmation
520
Warning popup

FIG. 5

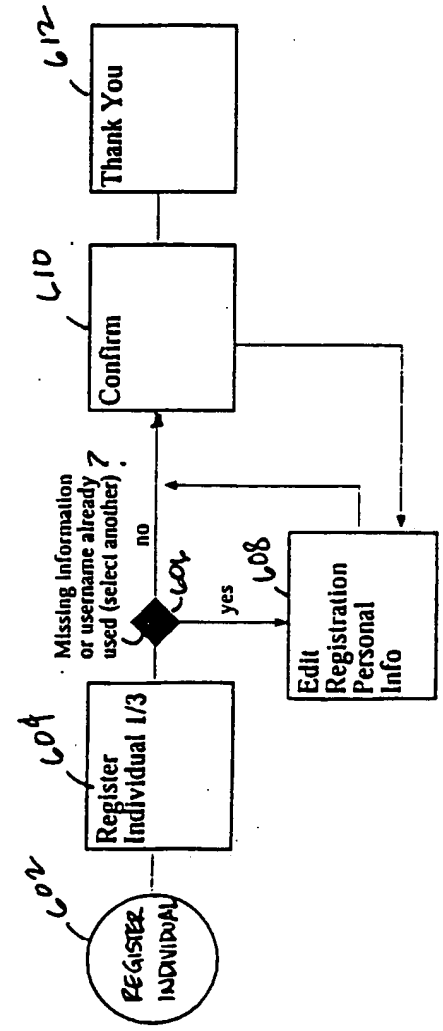
602
REGISTER INDIVIDUAL
604
Register Individual 1/3
606
Missing information or username already used (select another) ?
no
yes
608
Edit Registration Personal Info
610
Confirm
612
Thank You

FIG. 6

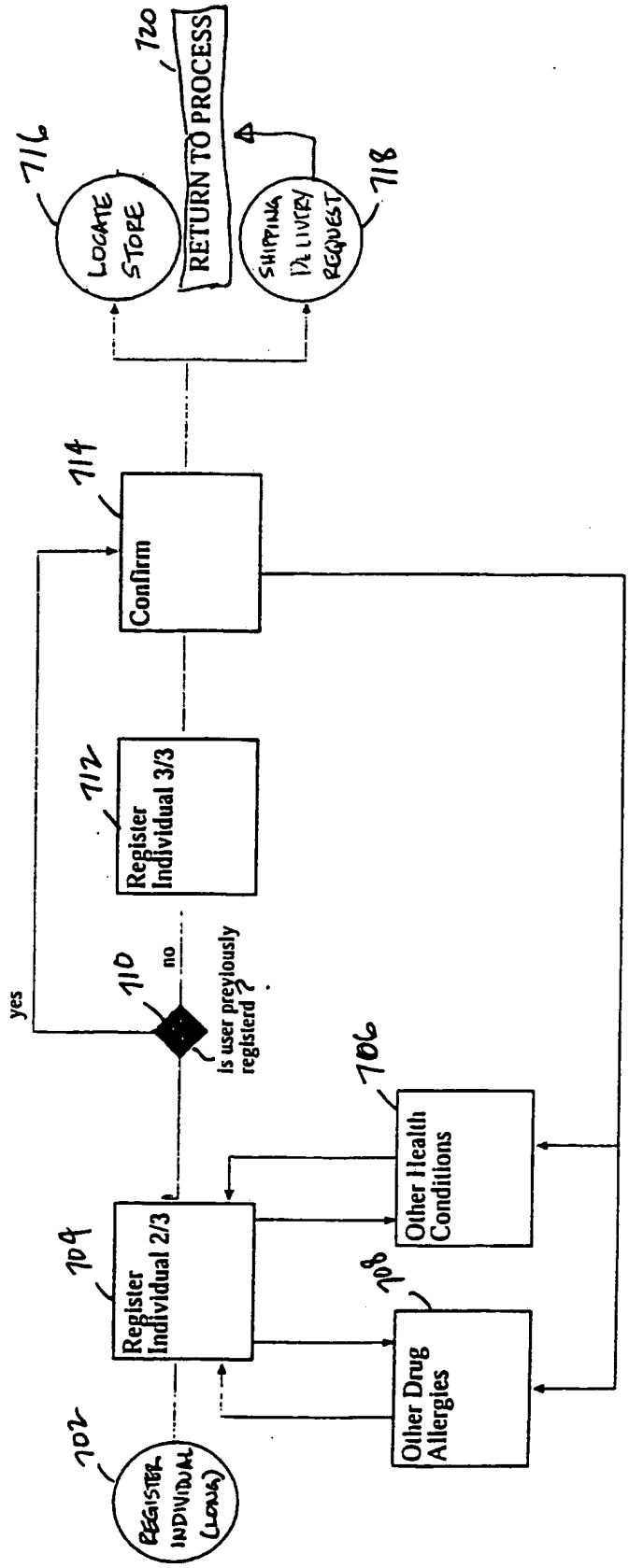
REGISTER INDIVIDUAL (LOGIN)
702
Register Individual 2/3
704
Other Drug Allergies
708
Other Health Conditions
706
is user previously registerd?
710
yes
no
Register Individual 3/3
712
Confirm
714
LOCATE STORE
716
SHIPPING / DELIVERY REQUEST
718
RETURN TO PROCESS
720

FIG. 7

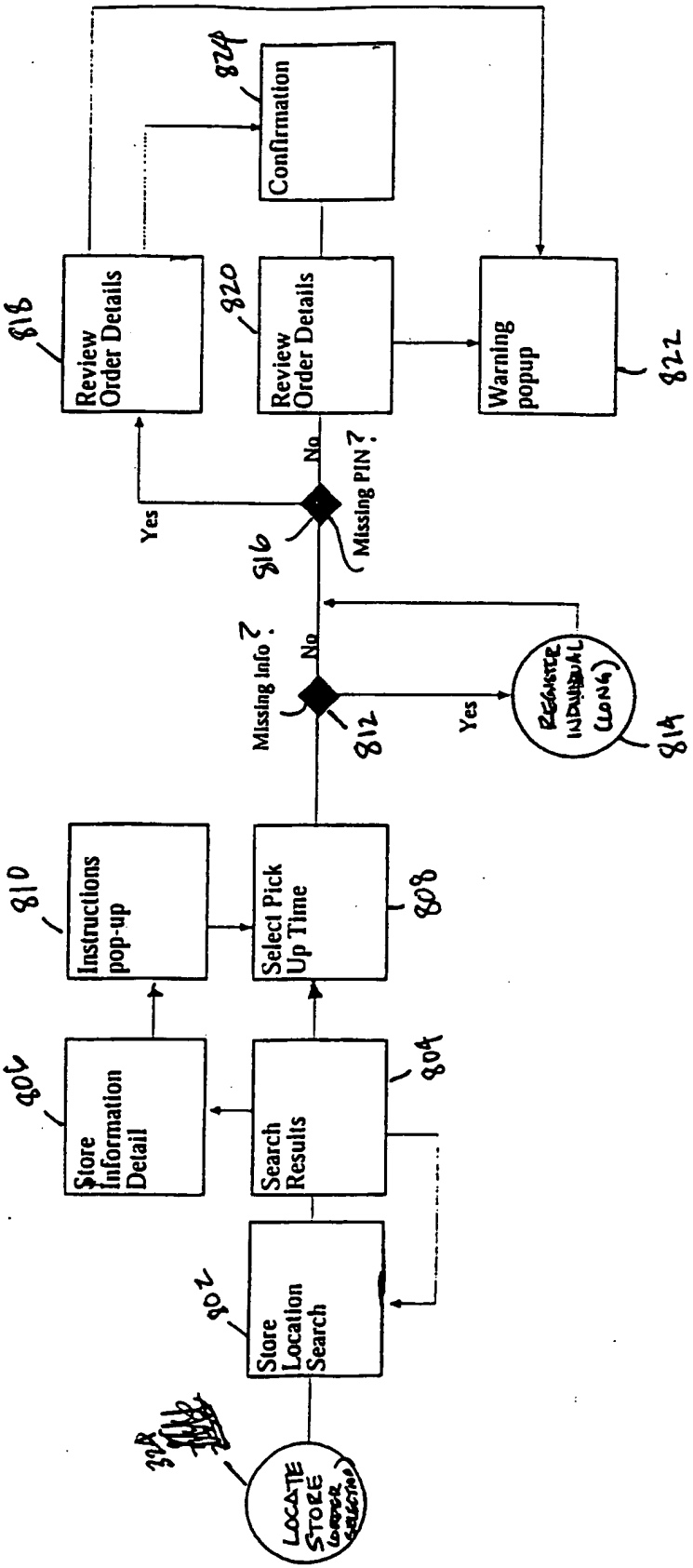
Store Location Search
902
Search Results
904
Store Information Detail
906
Select Pick Up Time
908
Instructions pop-up
910
Missing Info ?
No
812
Yes
Register Individual (Loyalty)
814
Missing PIN ?
No
816
Yes
Review Order Details
818
Review Order Details
820
Warning popup
822
Confirmation
824

FIG. 8

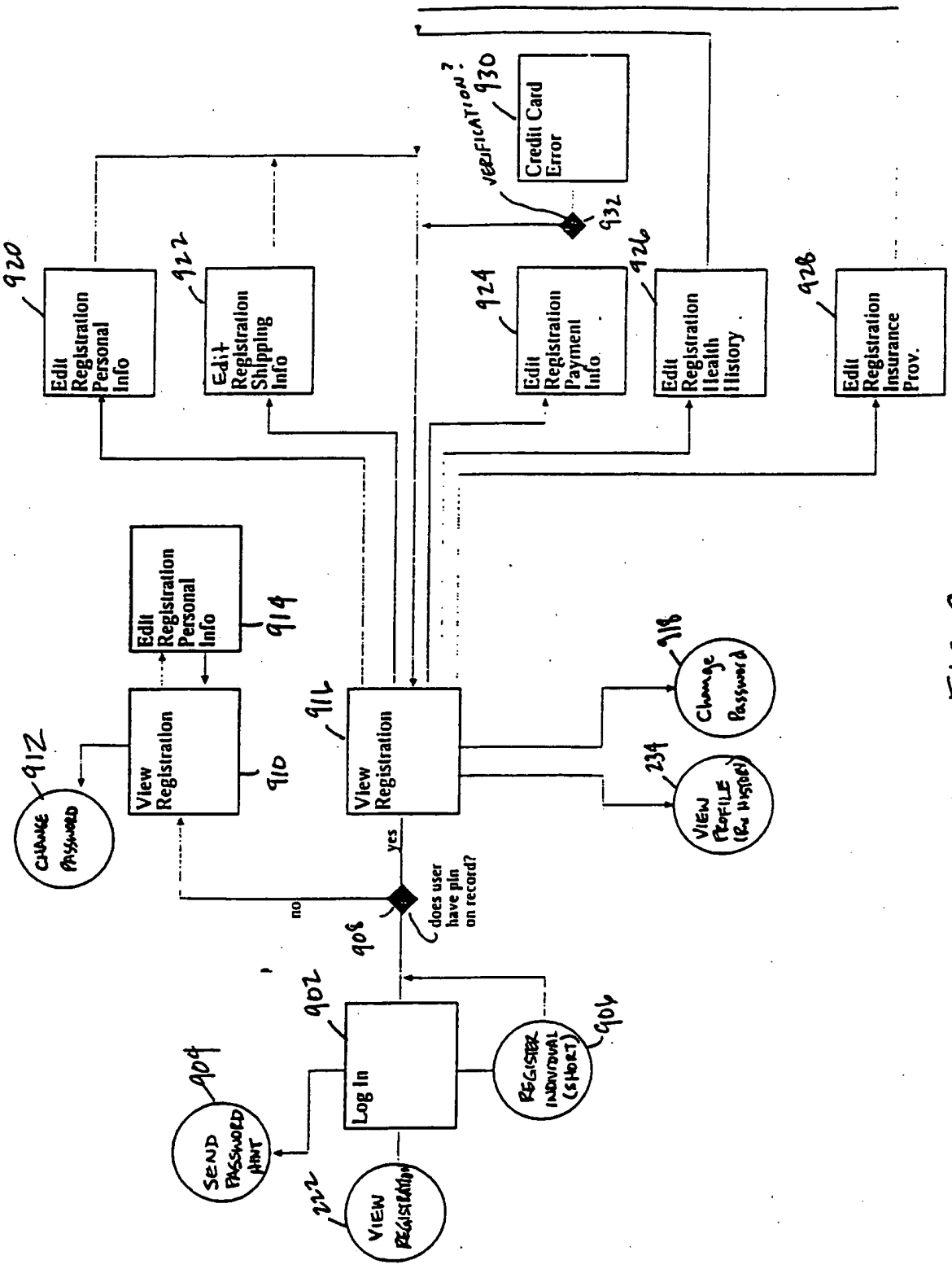
Log In
902
Register Individual (short)
904
Send Password Hint
906
does user have pin on record?
yes
no
View Registration
910
Edit Registration Personal Info
914
View Registration
916
Change Password
918
View Profile (Rx History)
234
Change Password
912
View Registration
922
Edit Registration Personal Info
920
Edit Registration Shipping Info
922
Edit Registration Payment Info
924
Edit Registration Health History
926
Edit Registration Insurance Prov.
928
Credit Card Error
930
Verification?
932

FIG. 9

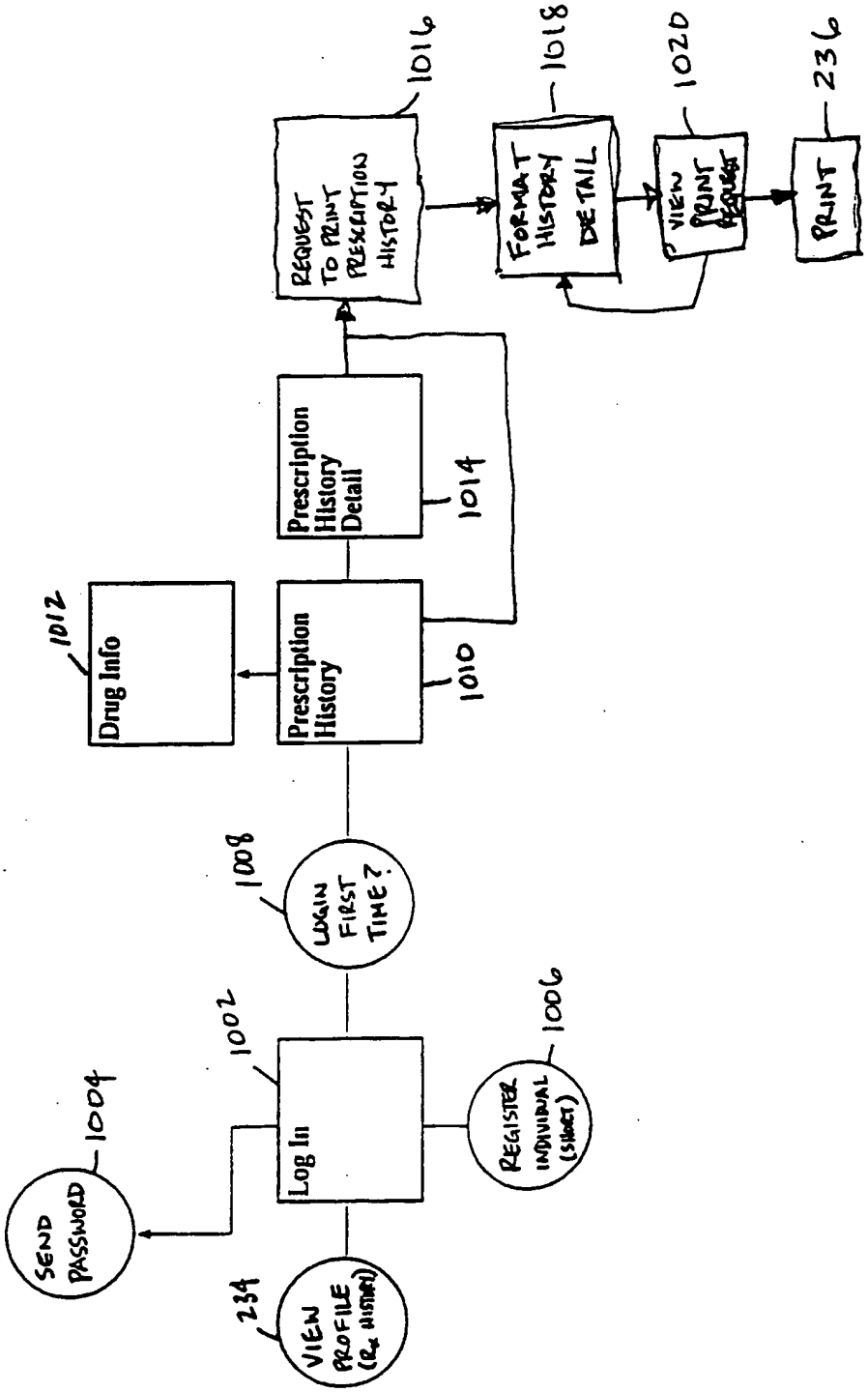
SEND PASSWORD
1004
Log In
1002
VIEW PROFILE (& HISTORY)
234
LOGIN FIRST TIME?
1008
REGISTER INDIVIDUAL (SUBJECT)
1006
Drug Info
1012
Prescription History
1010
Prescription History Detail
1014
REQUEST TO PRINT PRESCRIPTION HISTORY
1016
FORMAT HISTORY DETAIL
1018
VIEW PRINT PREVIEW
1020
PRINT
236

FIG. 10

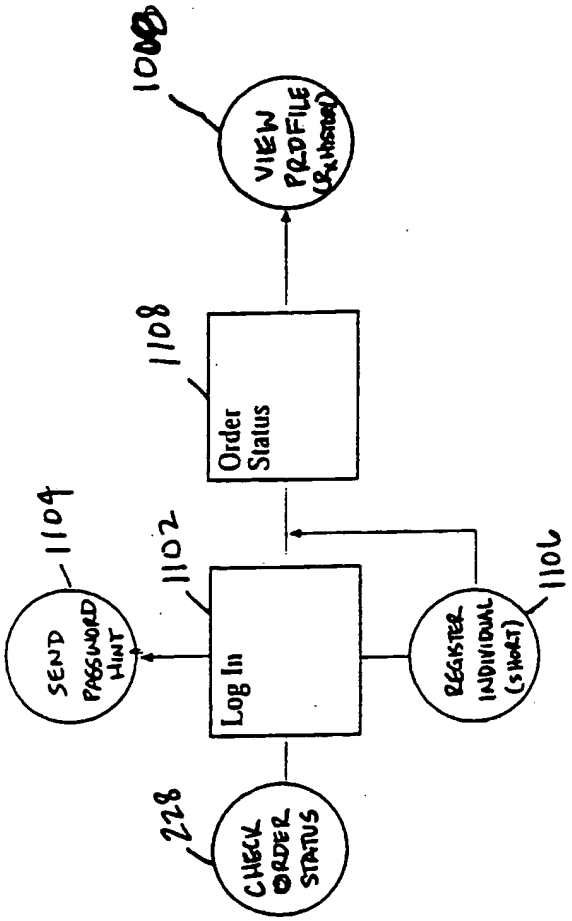
1108
VIEW PROFILE
Order Status
1104
SEND PASSWORD HINT
1102
Log In
1106
REGISTER INDIVIDUAL
228
CHECK ORDER STATUS

FIG. 11

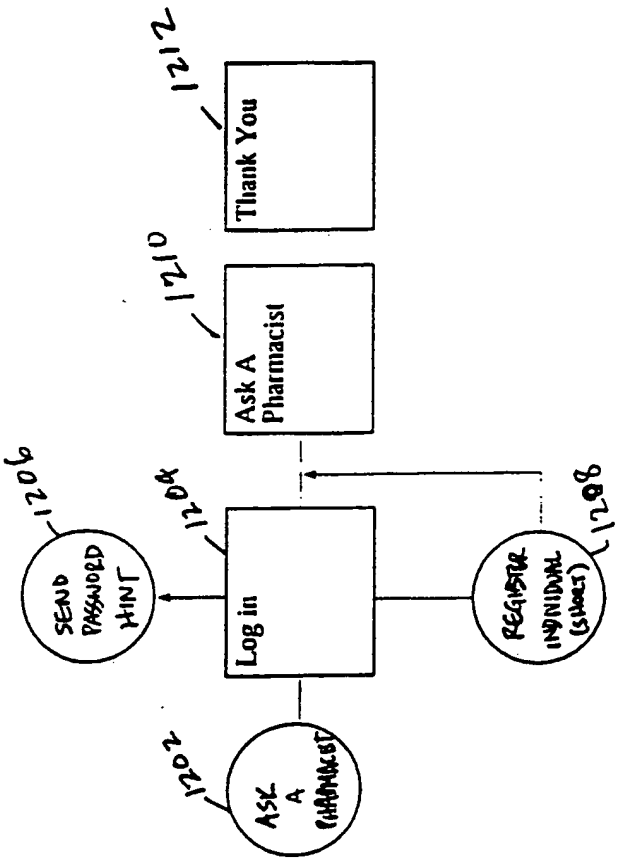
1212
Thank You
1210
Ask A Pharmacist
1206
SEND PASSWORD HINT
1204
Log in
1208
REGISTER INDIVIDUAL (SUBSET)
1202
ASK A PHARMACIST

FIG. 12

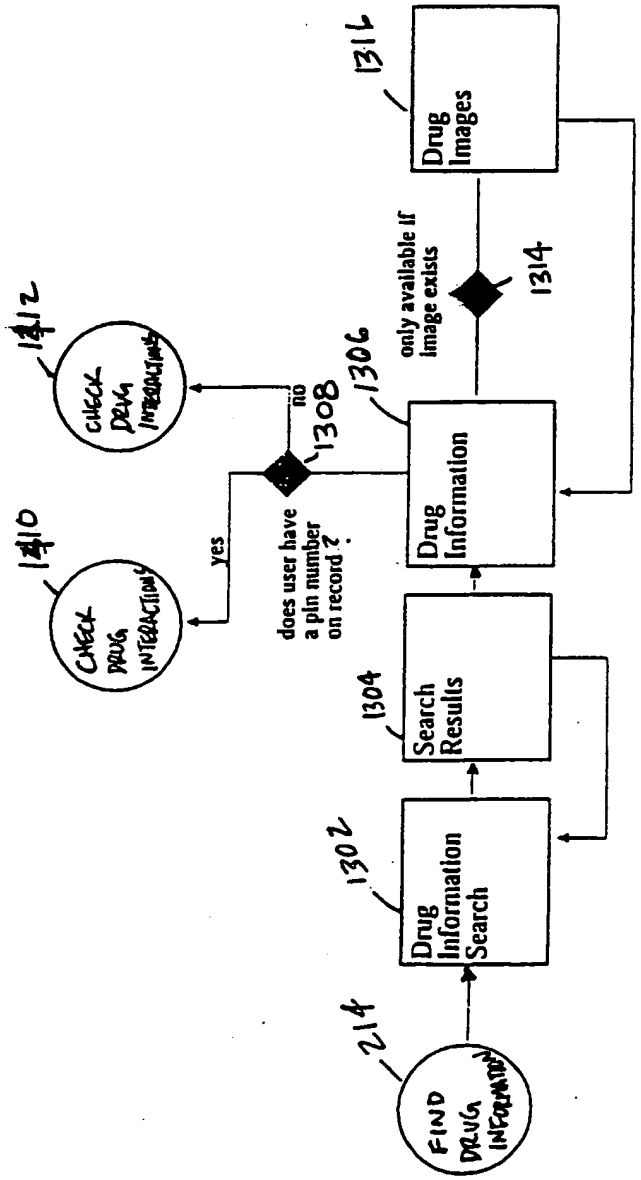
214
FIND DRUG INFORMATION
1302
Drug Information Search
1304
Search Results
1306
Drug Information
1308
does user have a pin number on record ?
yes
no
1310
CHECK DRUG INTERACTIONS
1312
CHECK DRUG INTERACTIONS
1314
only available if image exists
1316
Drug Images

FIG. 13

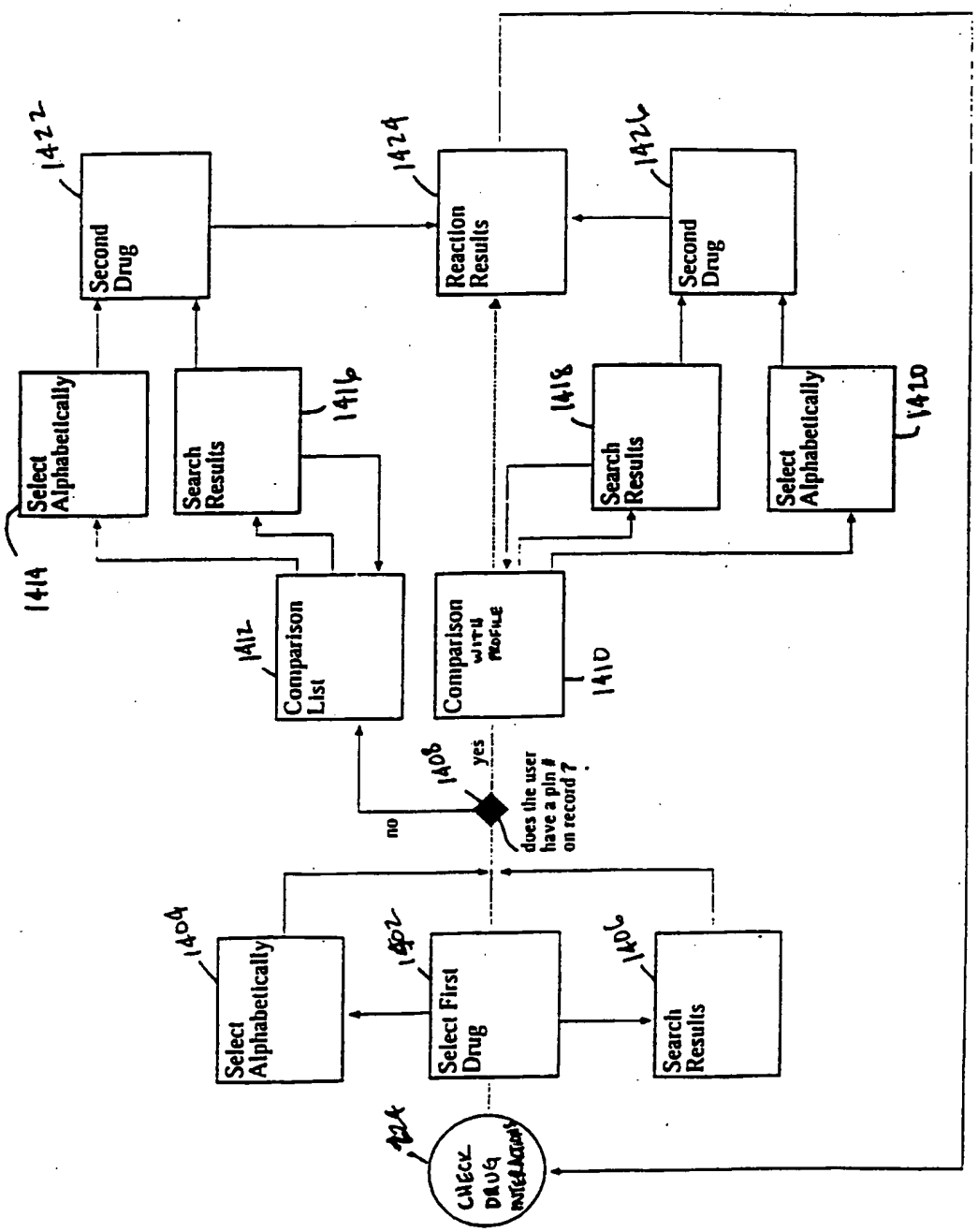
1422
Second Drug
1424
Reaction Results
1426
Second Drug
Select Alphabetically
1414
Search Results
1416
Search Results
1418
Select Alphabetically
1420
Comparison List
1412
Comparison with profile
1410
1408
yes
no
does the user have a pin # on record ?
1404
Select Alphabetically
1402
Select First Drug
1406
Search Results
1424
CHECK DRUG INTERACTIONS

FIG. 14

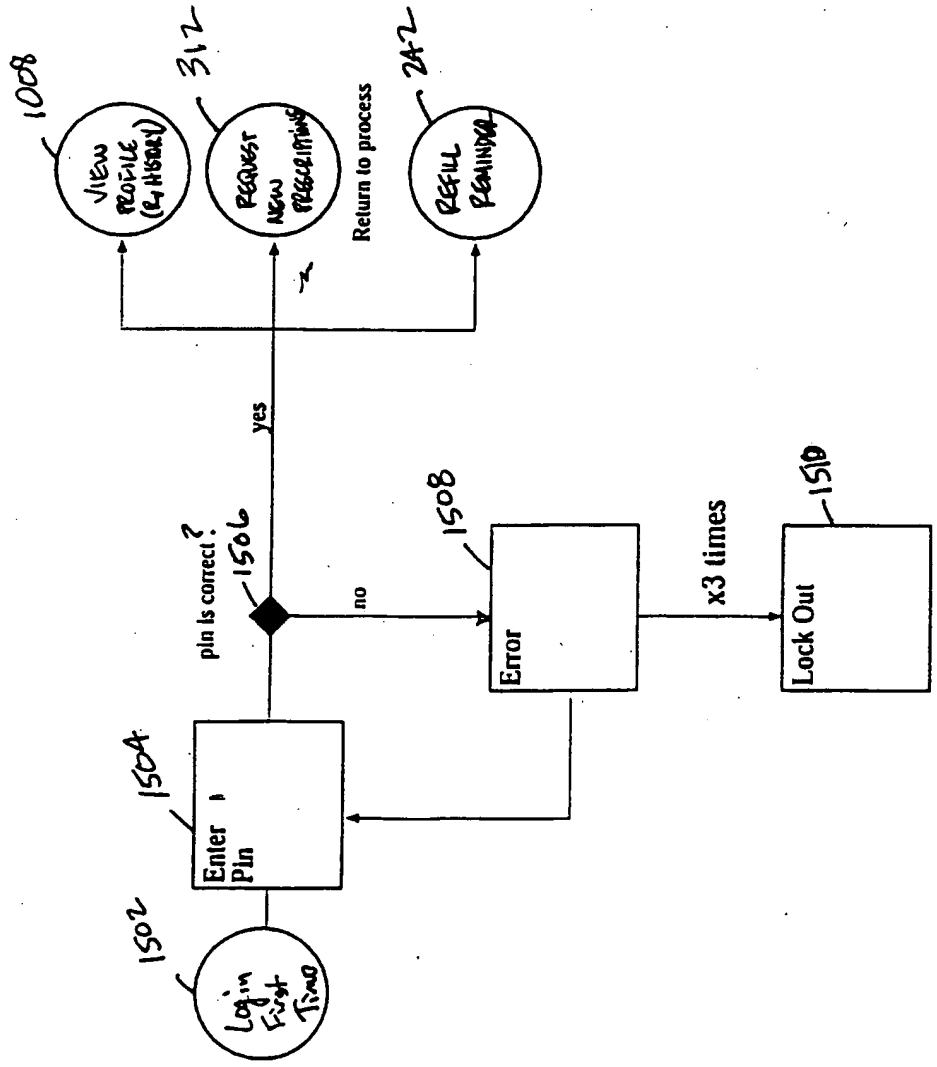
1008
312
242
View Profile (& History)
Request New Prescriptions
Return to process
Refill Reminder
yes
pin is correct ?
1506
no
1508
Error
x3 times
1510
Lock Out
1504
Enter Pin
1502
Login First Time

FIG. 15

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(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **BLESER, Michael** [US/US]; 234 Forestway Drive, Deerfield, IL 60015 (US). **MCCAULEY, Tim** [US/US]; 1036 Shari Lane, Libertyville, IL 60048 (US). **RIEDL, George** [US/US]; 315 West Maple Drive, Libertyville, IL 60046 (US). **ROESNER, Randy** [US/US]; 36791 North Yew, Lake Villa, IL 60046 (US). **WEINERT, Ron** [US/US]; 1720 Ambia Court, Mundelein, IL 60060 (US).

(74) Agents: **ERTEL, Patrick, D.** et al.; Marshall, O'Toole, Gerstein, Murray & Borun, 6300 Sears Tower, 233 South Wacker Drive, Chicago, IL 60606 (US).

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Published:
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WO 01/37138 A3

(54) Title: APPARATUS AND METHOD FOR ACCESSING PHARMACY INFORMATION AND ORDERING PRESCRIPTIONS

(57) Abstract: A method and system for implementing an on-line pharmacy website that allows customers of a particular pharmacy company to order new prescriptions, refill prescriptions and transfer existing prescription. The method and system also afford a user access to personal information such as their prescription history. Integration of an internet server hosting the website with a pharmacy company's intranet server and customer database allows a customer full on-line access to their information stored by the pharmacy company, as well as access to drug information. A further feature includes allowing the user to format and print their prescription history and records. Another feature of the system and method includes "click-free" registration of customers with the website by entry of customer data by company personnel at any company location connected to the intranet server, such as at a pharmacy store. Personnel solicit information from the customer including, for example, an e-mail address. Registration of the customer is then performed by the company personnel and website access information is, in turn, communicated to the customer via e-mail.

INTERNATIONAL SEARCH REPORT

Inte. ...nal Application No
PCT/US 00/31550

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G06F17/60

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	COLCHAMIRO R: "INDEPENDENTS LOOK TO GO ONLINE" AMERICAN DRUGGIST, vol. 216, no. 9, September 1999 (1999-09), pages 1-3, XP002945294 NY, USA ISSN: 0190-5279 the whole document ---	1-16
X	WO 96 13790 A (MED E SYSTEMS CORP) 9 May 1996 (1996-05-09) page 7, line 8 -page 11, line 3 page 48, line 5 - line 20 page 56, line 25 -page 58, line 29 page 83, line 4 -page 88, line 10 --- -/--	1-16

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
18 March 2002	03/04/2002

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Corcoran, P

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 00/31550

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	TROY WOLVERTON: "Online pharmacies partner for power" CNET NEWS.COM, 'Online! 8 October 1999 (1999-10-08), page 1 XP002193374 Retrieved from the Internet: <URL:http://news.com.com/2100-1023-231150.html> 'retrieved on 2002-03-13! the whole document	1-16
A	KORA MCNAUGHTON: "Can Net drugstores outpace the chains ?" CNET NEWS.COM, 'Online! 24 February 1999 (1999-02-24), pages 1-2, XP002193375 Retrieved from the Internet: <URL:http://news.com.com/2100-1017-222104.html> 'retrieved on 2002-03-13! the whole document	1-16
A	US 5 790 785 A (KLUG JOHN R ET AL) 4 August 1998 (1998-08-04) column 15, line 10 -column 16, line 37 column 1, line 1 -column 13, line 60	6,10,13, 14
A	EP 0 921 488 A (COHEN KOPEL H) 9 June 1999 (1999-06-09) column 2, line 49 -column 12, line 41	8,12,16

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INTERNATIONAL SEARCH REPORT

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